

BEFORE THE OFFICE OF THE COMMISSIONER OF RAILROADS

STATE OF WISCONSIN

Petition of the Wisconsin Department of Transportation for the Alteration of a Public Crossing of the Wisconsin Central Ltd. Tracks with Grand Avenue (STH 13) in the City of Wisconsin Rapids, Wood County

9164-RX-569

FINAL DECISION

By letter dated May 28, 2004, the Wisconsin Department of Transportation (DOT) filed a petition with the Office of the Commissioner of Railroads (OCR) under §§86.13, 195.28, 195.285, and 195.29, Stats., for the alteration of a public crossing of the Wisconsin Central Ltd. (WCL) tracks with Grand Avenue (STH 13) in the City of Wisconsin Rapids, Wood County (crossing no. 392 720Y / MP 49.23).

The DOT also proposes to retain the exempt status of the Grand Avenue (STH 13) crossing.

The DOT also petitioned the OCR to determine the adequacy of warning devices at the crossing of the WCL tracks with Bonow Avenue (crossing no. 693 755G / MP 50.15).

Pursuant to due notice, public hearing was held in this matter on July 13, 2004 in Wisconsin Rapids, Wisconsin with hearing examiner Douglas S. Wood presiding.

On July 28, 2004, the hearing examiner issued a proposed decision. On August 11, 2004, the Wisconsin Department of Transportation filed comments supporting the proposed decision. DOT also stated it reached an agreement with the WCL to replace some of the rubber panels at the Bonow Avenue crossing with the same cost-share as at Grand Avenue (STH 13) if the railroad completes the work prior to the start of the detour route on April 1, 2005. The Commissioner adopts the proposed decision as final without change.

Appearances:

Parties

Wisconsin Department of Transportation, Petitioner
by
Mark Morrison, PE
Grade Crossing Safety Engineer
PO Box 7914
Madison, Wisconsin 53707-7914

As Interest May Appear:

Wisconsin Central Ltd.
by
Terry Lee, PE
Manager Engineering Services
1625 Depot Street
Stevens Point, Wisconsin 54481

Findings of Fact

THE COMMISSIONER FINDS:

The Wisconsin Department of Transportation proposes to alter the public crossing of the Wisconsin Central Ltd. tracks with Grand Avenue (STH 13) in the City of Wisconsin Rapids. The DOT plans to reconstruct Grand Avenue between 25th Avenue and the Riverview Expressway during the 2005 construction season. The project will add turn lanes at the crossing.

The DOT also proposes to retain the exempt status of the Grand Avenue (STH 13) crossing. Section 346.45 Stats., requires certain specified vehicles, such as fuel trucks and school buses, to stop at highway/rail crossings unless posted with an exempt sign. The exemption has improved traffic flow at the Riverview Expressway/Grand Avenue (STH 13) intersection. The crossing shall retain its exempt status.

The DOT also petitioned the OCR to determine the adequacy of warning devices at the crossing of the WCL tracks with Bonow Avenue (crossing no. 693 755G / MP 50.15).

Grand Avenue (STH 13) Crossing no. 392 720Y / MP 49.23

Grand Avenue (STH 13) is currently a four-lane roadway with an urban cross section consisting of a 12' and a 10' travel lane in each direction from Riverview Expressway to 17th Avenue. Also included at the existing railroad crossing are designated left and right turn lanes on to Riverview Expressway from West Grand Avenue. There are 5'-wide sidewalks on each side of the roadway at the crossing. Grand Avenue (STH 13) intersects the tracks at an angle of 54.5°. The crossing consists of one mainline track.

The proposed cross section of Grand Avenue (STH 13) is an urban cross section with a 12'-wide inside lane and 14'-wide outside lane in each direction. The section will also include a 4'-wide terrace and 5'-wide sidewalk on each side. At the crossing, an 11'-wide left turn lane and a 14'-wide right turn lane that flares to 30' on Riverview Expressway are also proposed. Medians will be installed on each approach to the crossing. The posted speed limit will remain 25 miles per hour. The angle of the crossing will remain at 54.5°.

The existing railroad crossing consists of a 132' long rubber-crossing surface from back of sidewalk to back of sidewalk. This rubber crossing is in poor condition. The existing rubber-crossing surface will be replaced with a concrete panel crossing. The new crossing will extend one foot beyond the back of the proposed sidewalk on both sides of the roadway, which is 187' as measured along the centerline of the track.

Grand Avenue (STH 13) carries 16,525 ADT (average daily traffic). The average daily traffic is expected to increase to 19,625 vehicles per day in the design year 2025. The speed limit is 25 mph.

The railroad currently operates 6 through train movements per day over the crossing location at a timetable speed of 40 mph. Train speeds are currently restricted to 25 mph. The railroad also operates 14 switch movements per day.

A driver traveling at 25 mph needs a distance of 187' to stop safely. The crossing is visible from more than 1000' in each direction. Assuming a train speed of 40 mph, a driver traveling at 25 mph needs to see a train when it is 420' from the crossing from a point 187' down the highway. The sight distance available in each quadrant from the safe stopping distance is greater than 420' in each quadrant except the northwest where the sight distance is 85' due to a building.

At all crossings, except those with gates, a driver stopped 15' short of the near rail must be able to see far enough down the track, in both directions, to determine if sufficient time exists for moving their vehicle safely across the tracks to a point 15' past the far rail, prior to the arrival of a train. Required clearing sight distance along both directions of the track, from the stopped position of the vehicle, is dependent upon the maximum train speed and the acceleration characteristics of the "design" vehicle. The necessary clearing sight distance at the Grand Avenue (STH 13) crossing is 895'. The available clearing sight distance is over 1000' in each direction.

The exposure factor at this crossing is 330,500. The exposure factor in 2025 will be 392,500 assuming 20 trains per day. The exposure factor equals the product of the number of trains per day and the number of highway vehicles per day, which yields a numerical value for the potential conflicts each day at the crossing.

One train-vehicle accident has occurred at this crossing since 1973. The accident occurred in 1977.

Grand Avenue (STH 13) intersects Riverview Expressway 60' east of the track. That highway intersection is controlled by traffic signals. The traffic signals and the railroad crossing signals are interconnected with a preempt phase. There are 'no left turn' blank-out signs on Riverview Expressway.

The crossing presently has two mast-mounted automatic flashing lights with gates for westbound traffic, one in a median island and the other behind the outside curb. For eastbound traffic there are mast-mounted automatic flashing lights with a gate in the median island and cantilevered automatic flashing lights with a gate mounted on the outside of the roadway by the sidewalk. These warning devices are inadequate. The existing warning devices will be adequate until such time as the new warning devices are installed. In order to adequately protect public safety, new 12"

LED automatic flashing lights with gates and constant warning time circuitry are needed. The automatic flashing lights will be mast-mounted except for one set of cantilevered automatic flashing lights for eastbound traffic. The DOT shall continue to provide advanced pre-emption and either blank-out signs or protected only turn phasing.

In summary, the alteration of the crossing at-grade of the WCL tracks with Grand Avenue (STH 13) will promote public safety and convenience by widening the through travel lanes, adding medians to separate the left-turn only lane and the westbound and eastbound lanes, and by widening the right-turn only lane.

Bonow Avenue

Crossing no. 693 755G / MP 50.15

Grand Avenue will be closed to traffic during the construction. Traffic will be detoured and will cross the Valley Sub at Bonow Avenue. It is anticipated that during the detour the traffic on Bonow Avenue will rise significantly from the existing 2800 vehicles per day to 16,500. The posted speed on Bonow Avenue is and will remain 45 mph during the detour.

The railroad currently operates 6 through trains and 6 switch trains per day over the crossing location at a timetable speed of 25 mph.

The exposure factor at this crossing is 33,600. The exposure factor will increase to 198,000 during the detour.

No train-vehicle accidents have occurred at this crossing since 1973.

An accident prediction model developed by the Federal Railroad Administration (FRA) allows a projection of expected future accidents based on a number of factors including train volume and speed, highway volume and accident history. The model can be used to compare the expected accident rates given different warning devices. The predicted rate, however, is only one tool for evaluating safety improvements and does not replace sound judgment based on a consideration of all known factors.

During the detour, the Bonow Avenue crossing has a predicted accident rate of .0443 accidents per year, or one accident every 22.6 years with the existing automatic flashing lights. If gates are added, the predicted accident rate drops to .0137 accidents per year, or one accident every 73 years. Adding gates will substantially improve safety.

The crossing presently has 12" LED automatic flashing lights with constant warning time circuitry and advance warning signs for warning devices. The existing warning devices are inadequate. The existing warning devices will be adequate until such time as the new warning devices are installed. In order to adequately protect public safety, gates need to be added to the existing warning devices.

Timetable

The roadway project is scheduled to commence construction on approximately April 1, 2005. The crossing surface needs to be completed during stage two of the construction project, which will occur during the second half of the construction season – commenced after August 1 and completed prior to October 15, 2005. Signal work needs to be completed before the roadway is reopened to traffic on November 1, 2005. The gates at Bonow Avenue should be installed prior to closing Grand Avenue and detouring traffic, which is anticipated to occur on April 1, 2005.

Funding

The project will reimburse the railroad 100% for the crossing signal work at West Grand Avenue and Bonow Avenue. The project will also reimburse the railroad 89% (167/187) for the crossing surface work at the West Grand Avenue crossing.

Ultimate Conclusions on the Issues

THE COMMISSIONER CONCLUDES:

1. That the alteration of the crossing at-grade of Grand Avenue (STH 13) with the Wisconsin Central Ltd. tracks in accordance with the design plans of the Wisconsin Department of Transportation and the City of Wisconsin Rapids, in the City of Wisconsin Rapids, Wood County will promote public safety and convenience.
2. That in order to adequately protect and promote public safety, it is necessary to install and maintain new 12" LED automatic flashing lights with gates and constant warning time circuitry at the Grand Avenue (STH 13) crossing. The automatic flashing lights will be mast-mounted except for one set of cantilevered automatic flashing lights for eastbound traffic. The DOT shall continue to provide advanced pre-emption and either blank-out signs or protected only turn phasing.
3. That in order to adequately protect and promote public safety, it is necessary to add gates to the existing signal equipment at the Bonow Avenue crossing.
4. That it is reasonable that the Wisconsin Central Ltd. bear 11% of the cost for the Grand Avenue (STH 13) crossing construction.

Conclusion of Law

THE COMMISSIONER CONCLUDES:

That the jurisdiction of the Office of the Commissioner of Railroads under §§86.13, 195.28, 195.285, and 195.29, Stats., extends to this matter. Accordingly, the Office enters an order consistent with the findings of fact.

Order

THE COMMISSIONER ORDERS:

1. That the **Wisconsin Central Ltd.** shall install and maintain a crossing at-grade of Grand Avenue (STH 13) with its tracks in accordance with the design plans of the Wisconsin Department of Transportation and the City of Wisconsin Rapids, in the City of Wisconsin Rapids, Wood County between **August 1, 2005 and October 15, 2005** (Crossing no. 392 720Y / MP 49.23).

2. That the **Wisconsin Central Ltd.** shall install and maintain 12" LED automatic flashing lights (including one cantilevered signal for eastbound traffic) with gates, constant warning time circuitry, and other appropriate appurtenances in accordance with such plans as are filed with and approved by the Office of the Commissioner of Railroads at the crossing of its tracks with Grand Avenue (STH 13) at-grade in the City of Wisconsin Rapids, Wood County by **November 1, 2005** (Crossing No. 392 720Y / MP 49.23).

3. That the **Wisconsin Department of Transportation** shall continue to provide advanced pre-emption and either blank-out signs or protected only turn phasing.

4. That the **Wisconsin Central Ltd.** shall add and maintain gates to the existing signal equipment and other appropriate appurtenances in accordance with such plans as are filed with and approved by the Office of the Commissioner of Railroads at the crossing of its tracks with **Bonow Avenue** at-grade in the City of Wisconsin Rapids, Wood County by **April 1, 2005** (Crossing No. 693 755G / MP 50.15).

5. That the **Wisconsin Central Ltd.** shall submit to the Office of the Commissioner of Railroads signal and circuit plans with the cost estimate of its proposed installation and upon completion of the signal project, a detailed statement of the actual cost to the Office and to the Wisconsin Department of Transportation.

6. That the signal installation work herein ordered shall not begin until the district office of the Wisconsin Department of Transportation informs the railroad that they may start such work and such start notice will not be issued until appropriate federal aid or other funding arrangements have been assured. The cost of the new project initiated before the start notice will not be reimbursed with public funds and shall be the responsibility of the railroad.

7. That the **Wisconsin Central Ltd.** shall bear 11% of the cost of the Grand Avenue (STH 13) crossing construction and any cost assessed to the railroad pursuant to §195.60, Stats., for the investigation of this matter by the Office. The railroad shall not pass on those assessment costs either directly or indirectly.

8. That jurisdiction is retained.

Dated at Madison, Wisconsin, _____.

By the Office of the Commissioner of Railroads.

Rodney W. Kreunen
Commissioner of Railroads

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